

Public Health Emergency Preparedness and Response

- **Summary:** Missouri's local public health agencies (LPHAs) have developed plans and participated in exercises with community partners to practice public health response to various natural, biological, chemical, and pandemic disasters. Such an exercise involving local, state, and federal partners ended Friday, May 20th before the devastating tornado hit Joplin on May 22, 2011. The Joplin City Health Department provided vital services in the first 100 days following the tornado. Those services included providing staffing in the Emergency Operations Center (EOC) to direct health administrative operations, coordinating and conducting environmental and epidemiological services, coordinating and providing public health medical services, and animal control. Over 800 food establishment visits related to the storm were performed to ensure food safety resulting in no food-borne disease outbreaks. The equivalent of more than 13,000 acres were fogged, and 36 miles of ditches and 72 acres of depressions were inspected and treated with larvacide to control mosquitoes in the impacted tornado area. Over 17,000 immunizations were administered with the help of other local health departments and medical providers. The health department managed and directed 1931.5 hours of mutual aid for public health response from other local public health agencies and volunteers.

Detailed Story:

The Joplin City Health Department responded to the Joplin tornado by providing the following assistance:

Emergency Operations Center/Administrative Operations:

- Health department staff manned the EOC within minutes after the tornado until its closing.
- Other medical services partners, including the Jasper County Health Department, Access Family Care, and St. John's Regional Medical Center, aided in staffing the medical section of the EOC during its operation.
- Health department staff worked in the initial hours to establish communication with outside medical/shelter partners by acquiring four hand-held 800 MHz radios for distribution to the hospitals and Red Cross shelter.
- Health department staff worked in the initial hours after the storm with the American Red Cross to establish a location and supplies for a human shelter at Missouri Southern State University (MSSU). They continued working with the Red Cross shelter, coordinating with city operations throughout the time the shelter was needed.
- Health department staff worked in the initial hour after the storm to ensure Joplin Memorial Hall was made available for whatever tornado related need was identified. Initially the site was established for shelter, but it was eventually used for St. John's relocation.

- Health department staff in the EOC worked in the initial hours with the department's animal control staff to begin operation of a pet co-location shelter at the Red Cross shelter.
- In the following days, EOC health and medical section staff worked to coordinate available medical care sites in the area.
- EOC and medical section staff worked in the following weeks with the Environmental Protection Agency (EPA) in monitoring air quality in the damage zone.
- Health department staff acted as liaison with various county, state, federal, and non-profit health agencies throughout the operation.
- Health department staff worked with the Centers for Disease Control and Prevention (CDC), Missouri Department of Health and Senior Services (DHSS), and local providers in the investigation and response to murcomycosis fungal infections found in several residents receiving traumatic injury during the tornado. CDC provided ongoing investigation of the event.

Environmental/Epidemiological Services:

- Within the first hours after the storm the health department's environmental staff were called into the health department to begin loading and transporting the department's emergency cache of emergency human shelter supplies to the newly identified Red Cross shelter located at MSSU. The health department provided 80 cots and associated supplies to the Red Cross shelter. The City of Joplin shelter supplies were the first to be placed in the emergency shelter. Infection control procedures, disease monitoring and education programs for shelter staff at the Red Cross Shelters, and other larger independent shelters were implemented. There were no reports of widespread illness or disease outbreak associated with any of the shelters.
- Health department environmental staff provided over 800 food establishment visits related to the storm. Visits provided guidance and education to maintain a safe food supply.
- Over 400 food establishments were visited in the first 72 hours to control distressed food due to storm damage and power outages. Guidance and education were provided for a related boil advisory that was issued. This was done with mutual aid from other local health departments.
- Environmental health department staff inspected and educated volunteer food providers at temporary food sites. Visits began in the first 24 hours. No food borne disease outbreaks were reported from volunteer food sources.
- In addition to services that environmental staff provided, the health department managed and directed 435 environmental health volunteer hours. Volunteers looked at temporary food, and permitted food establishments, daycares, and other environmental health concerns. A total of 1931.5 hours of mutual aid for public health response were provided by volunteers and other local public health agencies.
- Mosquito fogging and application of larvacide started May 31st in the tornado area. Approximately three months later, 370 miles of fogging routes (equivalent to 13,454 acres) had been fogged in the impacted tornado area. A total of 36 miles of ditches and

72 acres of depressions were inspected and treated with larvacide to control mosquitoes in the impacted area.

- After EPA air monitoring ended in mid August, Joplin City Health Department staff provided asbestos air monitoring services to ensure continued safety of citizens. Health department staff provided expedient architectural plan reviews for the rebuilding of food, lodging, and swimming pool establishments.
- The health department provided water system boil advisory education to community and regulated facilities during period of low water pressure after the storm and provided power outage education to community and regulated facilities for damage zone.
- The health department implemented soil contamination testing and a yard remediation program for lead/cadmium in the damage zone for properties rebuilding as residence or other location where children will be present. This is due to the former lead/zinc mining history of the area and part of the ongoing EPA Superfund project in the area.
- The health department worked with the Missouri Department of Natural Resources after the storm for the proper collection and disposal of reported medical waste debris from destroyed physician offices, dental offices, and medical labs.

Medical Services:

- By May 23rd, Joplin City and Jasper County Health Departments' medical services staff worked with other local partners (state and local health departments, clinics, hospitals, etc.) to develop tetanus vaccine administration plan for residents and workers to provide protection from the tetanus disease many times associated with debris injuries. The plan included stationary and roving vaccine distribution locations moving throughout tornado affected neighborhoods.
- On May 24th, tetanus vaccinations began and in the following weeks over 17,000 tetanus vaccinations were administered by many medical partners in the community.
- A total of 14 area local health departments, along with other local medical partners, aided the local tetanus administration effort, including over 125 staff.
- On June 13th, the Joplin City Health Department provided, and continues to provide, tetanus vaccine and supplies to the Industrial Physical Therapy agency that is doing employment physicals for individuals who plan to help with the Joplin cleanup and rebuild.

Animal Control:

- Joplin City Health Department animal control staff and partner agencies (other animal control agencies, Humane Society of Missouri, etc.) picked up and transported 1,308 pets displaced by the tornado to the emergency pet shelter.
- A total of 529 pets were returned to owners from the emergency pet shelter operated by the American Society for the Prevention of Cruelty to Animals (ASPCA) and the Joplin Humane Society. ASPCA was able to place the remaining tornado displaced animals at

the end of emergency sheltering operation in new homes through their “Adopt-a-thon” and other placement activities.

- A pet “co-location” shelter with human American Red Cross shelter was opened by Joplin Animal Control within a few hours of the tornado. It was staffed by Joplin Animal Control for the first few days until being relieved by Humane Society of Missouri staff upon arrival in the community. The pet co-location shelter operated for over a month until American Red Cross human shelter moved to a smaller location.
- Within hours of the tornado, Joplin Animal Control worked with Joplin Humane Society staff to open a temporary pet triage clinic at the Humane Society to provide emergency medical care for animals transported to the emergency pet shelter.
- Within 24 hours, the Humane Society of Missouri was on scene working with Joplin Animal Control to develop a plan for animal rescue operations. Within 2 days these operations began.
- ASPCA arrived the day after the storm to handle the emergency pet sheltering operation, working with the Joplin Humane Society.
- By May 26th, Joplin Animal Control was on the ground conducting foot patrols making personal contact with the residents who were affected by the tornado. By staying visible and making ourselves available to the public in their time of need, we strengthened their confidence in our organization.
- After the Humane Society of Missouri animal rescue operation ended on June 1st, Joplin Animal Control initiated an animal trapping program in an attempt to capture the remaining animals that were hiding in the debris. With assistance from the ASPCA and many animal control officers from around the state, we were able to capture over 150 animals, of which most were claimed by their owners.
- Once the debris removal began, Joplin Animal Control Officers were instrumental in retrieving and disposing of the deceased animals.
- In a further attempt to retrieve more reclusive animals still remaining in tornado debris, Joplin Animal Control worked with the Joplin Humane Society to establish an animal trap loan program for residents wanting to attempt to trap their own pets.
- Joplin Animal Control worked with Joplin Humane Society and ASPCA to distribute pet food and supplies to residents within the affected area who had no means to obtain it on their own.
- Joplin Animal Control continues to assist citizens who are still missing their beloved pets. Even though most of the debris has been removed, we are still optimistic that these missing pets can be found. Through perseverance and compassion we have shown our community that Joplin Animal Control was here in the beginning and we will be here long after the City of Joplin has been rebuilt.